

**CEPHALOPHOLIS ARGUS SCHNEIDER, 1801 AND
CEPHALOPHOLIS SEXMACULATA (RÜPPELL, 1830)
(OSTEICHTHYES, SERRANIDAE): PROPOSED CONSERVATION
BY SUPPRESSION OF *BODIANUS GUTTATUS* BLOCH, 1790,
ANTHIUS ARGUS BLOCH, 1792 AND *SERRANUS ZANANA*
VALENCIENNES, 1828 Z.N.(S.)2470**

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A. *Cephalopholis argus* Schneider, 1801

The widespread Indo-Pacific serranid fish universally known as *Cephalopholis argus* Schneider, in Bloch & Schneider, 1801, p. 311, was first described as *Perca miniata* variety b by Forskål, 1775, p. 41, from the Red Sea. The name *Perca miniata* is now restricted to the valid species *Cephalopholis miniata*. The next description was that of Bloch, 1790, p. 36, pl. 224, who named the fish *Bodianus guttatus* (spelled *gutatus* in the text and *guttatus* on the plate). The type locality was given as Japan, but this is probably an error for Java, as pointed out for a comparable example in SCARIDAE by Valenciennes in Cuvier & Valenciennes, 1840, p. 221. Bloch's description was based on three specimens, of which only one syntype remains at the Zoologisches Museum in East Berlin (ZMB 5213, a dried skin of the right side, 231 mm SL). This was examined by the senior author.

2. The name *guttata* Bloch has not been used by authors in spite of its priority over *Cephalopholis argus* Schneider. This was probably due to the realisation that it is preoccupied by *Perca guttata* Linnaeus, 1758, p. 292, the abundant serranid fish of the tropical western Atlantic, *Epinephelus guttatus* (common name, red hind). From the time of Cuvier & Valenciennes early authors classified groupers (subfamily EPINEPHELINAE) in the genus *Serranus* Cuvier, 1817. With both *Perca guttata* and *Bodianus guttatus* in *Serranus*, the former is a senior secondary homonym of the latter. The same is true when both are classified in *Epinephelus*, as has been done by Smith, 1971, who reviewed American groupers. Most recent authors, however, recognise the genus *Cephalopholis* Schneider. *Perca guttata* Linnaeus then remains in *Epinephelus*, and *Bodianus guttatus* Bloch shifts to *Cephalopholis*, where it takes priority over *C. argus* Schneider.

3. We therefore request that the Commission suppress the name *Bodianus guttatus* Bloch so that the name *Cephalopholis argus* can be maintained. This grouper is one of the most common food fishes in the Indo-Pacific region, ranging from the Red Sea and the coast of East Africa to French Polynesia and the Pitcairn Group. It has been successfully introduced into the Hawaiian Islands. It is a distinctive species not to be

confused with others of the genus. The name *argus* has been widely used, not only in systematic publications but also in papers dealing with the biology of the fish. Examples are Hiatt & Strasburg, 1960; Randall & Brock, 1960; Smith & Smith, 1963; Helfrich *et al.*, 1968; Masuda *et al.*, 1975; Baissac, 1976; Allen & Steene, 1979; Jones & Kumaran, 1980; Randall, 1980; van der Elst, 1981; Shepard & Myers, 1981; Randall, 1983 and Heemstra & Randall in Fischer & Bianchi, 1984.

B. *Anthias argus* Bloch, 1792

4. The first use of the specific name *argus* for a grouper was that of Bloch, 1792, p. 111, pl. 317, who named *Anthias argus* from a drawing in the Linke collection in Leipzig. Bloch's colour painting shows a pale bluish-gray fish with scattered, small, brown spots or ocelli on head, body and fins (with about 21 spots or ocelli on the body). In his brief description, Bloch gave the dorsal fin ray count of 9 spines and 13 soft-rays (which agrees with the illustration). The general morphology, spotted color pattern, and 9 dorsal fin spines can only indicate a species of *Cephalopholis*, but no known species of this genus has 13 dorsal soft-rays, and none have a bluish-gray body with so few spots. There is no indication in Schneider's later account of *Cephalopholis argus* (Bloch & Schneider, 1801, p. 311) that he considered *Anthias argus* to be the same species. What is clear is that *Anthias argus* Bloch, 1792, is definitely a species of *Cephalopholis* and as such threatens the familiar name *Cephalopholis argus* Schneider, 1801, as a senior secondary homonym. Therefore, in order to maintain stability we request that the Commission suppress *Anthias argus* Bloch.

C. *Cephalopholis sexmaculata* (Rüppell, 1830)

5. *Serranus zanana* was first described by Valenciennes in Cuvier & Valenciennes, 1828, p. 339, from a dried half skin of the left side (MNHN 7271, 380 mm SL) collected at Mauritius by Commerson. Günther, 1859, p. 123, recognised this fish as a valid species and placed *Serranus spilurus* Valenciennes in Cuvier & Valenciennes, 1833, p. 433, in synonymy. The latter is now known to be a junior synonym of *Labrus leopardus* Lacepède, 1801, p. 450. Boulenger, 1895, p. 195, referred both *zanana* and *spilurus* to the synonymy of *leopardus*. Examination of the holotype of *zanana*, however, has revealed that this name is the earliest for the Indo-Pacific grouper *Serranus sexmaculatus* Rüppell, 1830. Had Valenciennes given the size of the holotype, Günther and Boulenger would surely not have erred in their synonymies, as *C. leopardus* attains a maximum standard length of only about 150 mm.

6. *Cephalopholis sexmaculata* is known throughout most of the tropical and subtropical Indo-Pacific region from the Red Sea (type locality) to French Polynesia. It is a well defined species for which only one junior synonym has been described. *C. coatesi* Whitley, 1937, from Queensland. The name *sexmaculata* has been in use since it was proposed and *zanana* has never been adopted for this species after the original

description except incorrectly as a supposed equivalent to *leopardus*. We request therefore, that the Commission suppress *Serranus zanana* Valenciennes. Recent authors who have used the name *Cephalopholis sexmaculata* (or *sexmaculatus*) include Katayama, 1960; Baissac, 1976; Masuda *et al.*, 1975; Allen & Steene, 1979; Rau & Rau, 1980; Shepard & Myers, 1981; Kyushin *et al.*, 1982; Morgans, 1982; Randall, 1983; Russell, 1983 and Heemstra & Randall in Fischer & Bianchi, 1984.

7. In summary the International Commission on Zoological Nomenclature is requested:

- (1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
 - (a) *guttatus* Bloch, 1790 as published in the binomen *Bodianus guttatus*;
 - (b) *zanana* Valenciennes, 1828 as published in the binomen *Serranus zanana*;
- (2) to use its plenary powers to suppress the specific name *argus* Bloch, 1792, as published in the binomen *Anthias argus*, for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (3) to place the following specific names on the Official List of Specific Names in Zoology:
 - (a) *argus* Schneider, 1801, as published in the binomen *Cephalopholis argus*;
 - (b) *sexmaculata* Rüppell, 1830, as published in the binomen *Cephalopholis sexmaculata*;
- (4) to place the following specific names on the Official Index of Rejected and Invalid Specific Names in Zoology:
 - (a) *guttatus* Bloch, 1790, as published in the binomen *Bodianus guttatus* and as suppressed under the plenary powers in (1a) above;
 - (b) *zanana* Valenciennes, 1828, as published in the binomen *Serranus zanana* and as suppressed under the plenary powers in (1b) above.
 - (c) *argus* Bloch, 1792, as published in the binomen *Anthias argus* and as suppressed under the plenary powers in (2) above.

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